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Fall Cutting Management for Alfalfa

By Steve Barnhart, Department of Agronomy

Rainfall throughout the growing season put most alfalfa producers behind two to three weeks for their first, and correspondingly their second, third, and sometimes forth cuttings. Now in mid-September, producers are trying to decide on their remaining fall harvest options and the possible impact on winter survival of the stands.

The goal is to help keep the forage plants 'perennial'

During the fall weeks, perennial forage legumes and grasses respond to shortening days and cooling average daily temperatures and progress through their gradual "cold hardening" process. The genetics of the variety determines how cold tolerant the plant crown and taproot can be during the winter months. Most successfully winter hardened alfalfa plants can withstand soil temperatures in the crown area to about 0 to 4 degrees F without crown tissue damage. At lower soil and crown temperatures, varieties and individual plants will vary in the degree of cold damage they may experience.

To acquire their potential for winter survival, alfalfa plants should get five to six weeks of uninterrupted growth to accumulate root carbohydrates and proteins before going dormant for the winter. A killing freeze, or the temperature that will stop further top growth for the season, is about 23 to 24 degrees F for several hours. So it is important to manage fall harvests to give the plants the best chance for strong winter survival.

Fall cutting management strategies

There are several things to consider if your alfalfa is knee high in mid-September and you are questioning whether to cut it. The first thing to consider is whether the field will be hay next year or not. If not, cut the alfalfa anytime. If it will be hay again next year, consider whether or not you need the hay. If not, then leave the last growth in the field – don't graze in fall or winter. On the other hand, if you do need the hay it is best to wait until at or after the killing freeze (23 to 24 degrees F) to cut. Then leave a five to six inch stubble.

Some producers may hesitate to do this because it is move difficult to dry hay in October, but the risk of winter injury to the field necessitates the wait. If you cut in mid-September, the plants will begin to regrow and begin to use what stored carbohydrates they have. The risk comes if this late growth leaves the plants with a relatively low level of available root stores when the killing freeze comes. Low levels of winter root stores may lead to a greater susceptibility to winter cold injury and to a delayed spring recovery.

Review this checklist to see how your summer and fall management has been relative to alfalfa stand vigor and overwintering potential.

These factors improve alfalfa winter survival:

- 4 inches or more of winter-long snow cover will help
- winter tolerant variety
- 2 or 3 summer cut harvest systems with good regrowth between cuttings
- 5 to 6 weeks of uninterrupted growth during September and October

- all of the last growth of the season left in the field (no cutting or grazing)
- if a late fall cut was taken or grazed, a 5 to 6 inch stubble was left
- management of insects (potato leafhoppers) during the growing season
- good levels of available potassium in the soil
- young stands – or older stands with no root or crown disease

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